



An Empirical Study on the Impact of Buyback of Shares on the Market

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ABSTRACT

Buybacks are an important financial tool used by companies strategically for their benefit by decreasing the number of outstanding shares in the market. It is important to gauge the extent of the effect that buybacks have. This paper is an attempt to study and analyse the impact of buyback announcements of share prices of companies in the Indian market. This paper details the study of a total of 140 cases of buyback announcements, made during 2010-19 period by applying event study methodology from market model analysis. The analysis is done separately for different methods of buybacks. The proxy for market return is chosen as Nifty 500 returns. The findings reveal that the buyback announcements have a significant impact on the share prices, with statistically significant average abnormal returns around event day. It was also observed that tender offer buyback announcements have a transitory effect and open offer a more permanent effect around event day.

Keywords: Buyback of Shares, NSE, Event Study, Market Model, Average Abnormal returns

INTRODUCTION

Buybacks of shares is one of the most prominent methods employed to carry out capital restructuring. The concept of Buyback was formed in 1960s, with US being the first company to integrate it into their financial system. Under Buyback, a company makes an offer to its shareholders in order to repurchase the shares. This exercise reduces the number of outstanding shares in the market. The most common reason that companies opt for buybacks is the availability of excess cash but no investment opportunities. The company is effectively stating that there is no better investment opportunity than them. Another reason is when managers believe that their shares have been negatively affected and the intrinsic value of the shares is more than what they are being traded for. In theory, buybacks affect an increase in financial metrics like return on assets and earnings per share. In India, buybacks were prohibited by the Companies Act, 1956 until 1998, when SEBI introduced the SEBI buyback of shares regulations, allowing companies to buy back their shares and other securities. Two methods of buybacks are prevalent in India. These include buybacks through tender offer and buybacks through open market offer. Under the tender offer, companies provide a tender offer to its shareholders to give back a part of their shares within a specified time in exchange for a price at a premium on the market price. Under open market offer, companies transact through a broker and the price of repurchase is dependent on demand, and only a price band is specified by the company. Over the years, companies in India have made extensive use of buybacks in order to achieve various potential benefits associated with it.

REVIEW OF LITERATURE

Varma & Munjal (2016) concluded that increasing earnings per share and capital restructuring were major motivators for companies to go for buybacks through tender offer. It was also stated that buybacks and dividends were not substitutes due to a positive relationship among them. Sivashanmugan & Sowmya (2019) studied 182 buyback announcement events for manufacturing companies from FY 2000-01 to FY 2018-19. They concluded that market reaction to buyback announcements were positive with indications of leakage of information prior to the announcement. It was also stated that effect of buybacks on the market was short-lived. Kaur & Dhandha (2016) examined the impact of share buyback, over a 61 days and 181 days event window period, on stock prices. It was concluded that buybacks had a negative impact pre and post buyback, with a positive impact on event day. It was also stated that there was no difference in average abnormal returns post and pre buyback. Bhargava & Agrawal (2015) studied a sample of 42 buyback announcements made through an open market offer. The study concluded significant average abnormal returns, indicating quick subsuming of information in the stock prices. Rajlaxmi (2013) observed that the market did not absorb information regarding the buyback announcement and suggested buyback announcement were means of only short term gain for investors. There have not been many studies regarding buybacks in the Indian market. The studies have also been limited in their scope based on either the sector the company is a part of or the type of buyback. The present study is an attempt to fill the gap, by carrying out an event study to examine the effect of buyback announcement separately for tender and open market

offers.

OBJECTIVE OF THE STUDY

- a) To study the concept of buyback of shares.
- b) To study trends in share prices pre and post buyback.
- c) To analyze the effect of announcement of buyback decision on selected companies.
- d) To study the impact of buyback based on method of buyback.

RESEARCH METHODOLOGY

The present study uses the market model from the event study methodology in order to study the effect of announcement of share buybacks on stock prices. Selection of companies was done from among the list of companies which made buyback announcements during the 2010-19 decade. The final sample selection was based on certain conditions, including:

- a) There should be no other major financial decisions during the event window period, including bonuses, splits, dividends, takeovers etc., which might impact the share prices.
- b) Data for both the event window and estimation period should be available.

Companies fulfilling the above mentioned criteria were selected. The date of announcement of buyback was taken from the official website of SEBI (www.sebi.gov.in). The data, including stock price and market price was retrieved from NSE's official website (www.nseindia.com).

To gauge the effect of buyback announcement on stock prices, abnormal returns (AR), average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) were studied over an event window period of 31 day, 15 days each for post and pre buyback with the event day designated with 0.

Under the market model of event study analysis, abnormal returns are calculated by using:

$$AR_{i,t} = R_{i,t} - ER_{i,t} \dots\dots\dots (1)$$

where $AR_{i,t}$ denoted the abnormal returns for company 'i' on day 't', $R_{i,t}$ the actual returns for company 'i' on day 't' and $ER_{i,t}$ the expected returns for company 'i' on day 't'.

Expected returns for a company are calculated as under:

$$ER_{i,t} = \alpha + \beta * R_{m,t} \dots\dots\dots (2)$$

Where $R_{m,t}$ is the closing market index on day 'i' and α, β represent the intercept and slope, respectively. These are calculated based on the Nifty 500 index.

The average abnormal returns for day 't' are calculated using:

$$AAR_t = \frac{\sum_{i=1}^N AR_{i,t}}{N} \dots\dots\dots (3)$$

Where, N denotes the number of samples (companies) under study.

The cumulative average abnormal return over the event window period is given by:

$$CAAR = \sum_i AAR_{i,t} \dots\dots\dots (4)$$

In order to determine the statistical validity of the findings, two-tailed t-test, with a significance level of 5%, will be applied over the event window (-15,+15) for all the companies. The t- value for AAR was calculated using:

$$t = \frac{AAR}{\sigma(AAR)/\sqrt{N}} \dots\dots\dots (5)$$

where, $\sigma(AAR)$ denotes the standard deviation of AAR over the event estimation period.

EMPIRICAL ANALYSIS

In this study, for the case of tender offer of buyback, 91 companies were identified, which fulfilled the requirements of the study. Table 1 shows the list of companies for this case. The date of announcement, slope, intercept and standard error for individual companies are also specified.

Table 1: Results of Market Model Analysis- Tender Offer

S. No.	Company Name	date of announcement	slope	intercept	standard error
1	GeeCee ventures	22-Feb-10	0.652109199	0.000311746	0.033096609
2	Geodesic Limited	19-May-10	1.067971944	-0.000545227	1.067971944
3	Bayer CropScience Limited	20-Sep-13	0.4770149	0.0018143	0.0162545
4	Clariant Chemicals (India) Limited	17-Jul-15	0.480161089	-0.000349679	0.025017154
5	Seamec Limited	29-Sep-15	0.713368664	-0.001090639	0.0255507
6	Technocraft Industries (India) Limited	31-Dec-15	1.176721551	0.001484509	0.026317984
7	National Aluminium Company Limited	22-Jul-16	0.836935033	0.000250099	0.022652192
8	NMDC Limited	18-Aug-16	1.067637941	-0.000613589	0.021285985
9	Bosch Limited	30-Aug-16	0.8761960	-0.0002614	0.0149559
10	Coal India Limited	2-Sep-16	0.820210034	-0.000691942	0.016654234
11	R systems International Limited	20-Sep-16	0.884628139	-0.001492709	0.02021592
12	Bharat Electronics Limited	20-Sep-16	0.5901510	-0.0044780	0.0735060
13	E-Clerx Sevices Limited	19-Oct-16	0.2571638	-0.0003681	0.0242483
14	Aarti Industries Limited	25-Oct-16	0.781919683	7.73224E-05	0.017347028
15	Aarti Drugs Limited	25-Oct-16	0.897104726	-0.000404341	0.020180421
16	Lakshmi Machine Works Limited	8-Nov-16	0.8090252	0.0003518	0.0158482
17	Allcargo Logistics Limited	15-Nov-16	1.235768404	-0.002831381	0.051869506
18	Navneet Education Limited	22-Nov-16	0.662735514	0.000524992	0.016306955
19	Vardhman Textiles Limited	29-Nov-16	0.861654613	0.001301357	0.016471841
20	Infinite Computer Solutions (India) Limited	29-Nov-16	1.025307277	0.000515889	0.024004115
21	Sasken Communication Technologies Limited	28-Dec-16	1.0554295	-0.000181123	0.024905559
22	Hexaware Technologies Limited	30-Dec-16	1.107236218	-0.001076058	0.016420581
23	Vardhman Acrylics Limited	3-Jan-17	1.100561609	0.001360346	0.029842252
24	Balrampur Chini Mills Limited	5-Jan-17	1.143928178	0.001643853	0.025703721
25	Dhanuka Agritech Limited	10-Jan-17	0.769914044	0.001161739	0.018858247
26	Apar Industries Limited	13-Jan-17	0.913462675	0.00030733	0.016733694
27	Gujarat Ambuja Exports Limited	6-Feb-17	1.321135443	0.002183601	0.027892207
28	NLC India Limited	7-Feb-17	0.7612183	0.000378563	0.018741257
29	GHCL Limited	9-Feb-17	1.501989092	0.002988678	0.024296461
30	NHPC Limited	14-Feb-17	1.010950073	0.000780625	0.016750244
31	Jagran Prakashan Limited	15-Feb-17	0.607575191	-2.56531E-05	0.016238254
32	SKF India Limited	31-Mar-17	0.3552153	0.0006640	0.0126746
33	Tata Consultancy Servces Limited	25-Apr-17	0.5007828	-0.0005595	0.0141279
34	Kaveri Seed Company Limited	9-Jun-17	1.018510694	-0.000164743	0.018686991
35	Engineers India Limited	23-Jun-17	0.900788513	-0.001537412	0.055038201
36	Just Dial Limited	7-Aug-17	1.189602757	-0.002737836	0.022787278
37	Vinati Organics Limited	23-Aug-17	1.103171156	0.001734513	0.018826782
38	Lovable Lingerie Limited	5-Dec-17	1.306749779	-0.001510328	0.017546903
39	Aarti Industries Limited	29-Dec-17	0.750457623	0.00010665	0.016591527

40	Technocraft Industries (India) Limited	1-Jan-18	0.81180764	0.000343904	0.019835884
41	Swaraj Engines Limited	8-Jan-18	0.2920707	0.0011418	0.0180225
42	Orbit Exports Limited	15-Jan-18	1.159720655	-0.003757683	0.049710215
43	Aarti Drugs Limited	17-Jan-18	0.510231769	-0.000588323	0.013022647
44	E-Clerx Sevices Limited	29-Jan-18	0.4835482	-0.0002328	0.0137406
45	Savita Oil Technologies Limited	30-Jan-18	0.907392488	0.002101003	0.025363198
46	Gandhi Special tubes limited	2-Feb-18	1.247603798	-0.000271167	0.020395915
47	Pidilite Industries Limited	8-Feb-18	0.948124112	0.000374262	0.012085046
48	Unichem Laboratories Limited	14-Feb-18	0.96976097	-3.04667E-05	0.016869793
49	FDC Limited	16-Feb-18	0.525616133	-0.000249042	0.016431061
50	Balrampur Chini Mills Limited	1-Mar-18	1.304729065	-0.002328088	0.019876125
51	Alembic Limited	19-Mar-18	1.586307808	0.000743198	0.026375449
52	Smartlink Holdings Limited	17-May-18	1.626819703	-0.000648292	0.024963084
53	Kaveri Seed Company Limited	30-Jul-18	1.835819231	-0.001201304	0.018456037
54	Tata Consultancy Sevces Limited	10-Aug-18	-0.1833937	-0.0009505	0.0467340
55	Navneet Education Limited	28-Aug-18	0.63387496	-0.001554976	0.019414517
56	Redington (India) Limited	24-Sep-18	1.175303362	-0.002105101	0.024882662
57	KIOCL Limited	25-Sep-18	1.787330409	0.000578871	0.040774545
58	mphasis Limited	5-Oct-18	0.259810915	0.002745157	0.021258488
59	Just Dial Limited	5-Oct-18	2.397183152	0.000303163	0.031186724
60	Larsen & Toubro Limited	8-Oct-18	1.2362513	-0.0000727	0.0106729
61	NLC India Ilimited	15-Oct-18	0.65987829	-0.001419037	0.016544318
62	National Aluminium Company Limited	23-Oct-18	1.552996436	-0.001118487	0.02413044
63	Cochin Shipyard Limited	23-Oct-18	0.667072896	-0.001267257	0.012759134
64	Bharat Heavy Electricals Limited	31-Oct-18	1.533328945	-0.00073107	0.018197639
65	SKF India Limited	7-Dec-18	0.4471420	0.0003952	0.0114148
66	Bosch Limited	18-Dec-18	0.6480271	0.0000440	0.0164010
67	Triveni Turbine Limited	21-Dec-18	0.415173545	-0.000671211	0.01998261
68	Dhanuka Agritech Limited	24-Dec-18	0.891511408	-0.002053788	0.019611196
69	Oil and Natural Gas Corporation Limited	27-Dec-18	0.964898273	-0.000839797	0.017121471
70	Tata Investment Corporation Limited	3-Jan-19	0.889472591	0.000178813	0.016131497
71	NMDC Limited	15-Jan-19	1.258995242	-0.001402452	0.017903712
72	R systems International Limited	22-Jan-19	1.114563177	0.000400566	0.027519916
73	HEG Limited	4-Feb-19	1.2334981	0.0010375	0.0338468
74	Ajanta Pharma Limited	4-Feb-19	1.3705849	-0.0006993	0.0188855
75	Shanthi Gears Limited	5-Feb-19	0.910322414	-0.00081784	0.019436743
76	Indian Energy Exchange Limited	6-Feb-19	2.1346364	-0.0088747	0.1478048
77	Tech Mahindra	28-Feb-19	0.661089224	0.001231466	0.019005301
78	Aarti Drugs Limited	25-Mar-19	0.622890521	8.47178E-06	0.019999023
79	Balrampur Chini Mills Limited	11-Apr-19	1.128770885	0.001358658	0.033468999
80	FDC Limited	29-May-19	0.814420308	-0.001684637	0.019456696
81	GeeCee ventures	7-Jun-19	1.025464152	-0.000553779	0.0202366
82	Wipro Limited	12-Jun-19	0.277602563	0.000305813	0.022624725
83	The Great Eastern Shipping	12-Jun-19	0.813582764	-0.001361723	0.021290221

	Company Limited				
84	S H Kelkar and Company Limited	17-Jun-19	0.815144145	-0.002201446	0.021746241
85	Greaves Cotton Limited	1-Jul-19	0.79741007	0.000430188	0.018809589
86	Star Cement Limited	3-Jul-19	0.642703697	-0.000322939	0.019515348
87	Eris Lifesciences Limited	9-Jul-19	0.446401625	-0.001689165	0.019204442
88	Kaveri Seed Company Limited	11-Nov-19	0.776785165	-0.000555466	0.023513978
89	J. B. Chemical and Pharmaceuticals Limited	15-Nov-19	0.435618441	0.000642457	0.015562898
90	MOIL Limited	20-Nov-19	0.863196527	-0.001033015	0.015029586
91	Indiabulls Ventures Limited	11-Dec-19	2.75446145	-0.005496502	0.040836541

Table 1 shows 36 companies that have a slope greater than 1, showing a greater proportion of returns with respect to a rising market condition, with the majority 55 showing the opposite effect. 52 out of the 91 companies have a negative intercept, indicating chances of fewer returns as compared to the overall market. Table 2 contains data, including the date of announcement, slope, intercept and standard error, regarding the buyback announcements made through an open market offer.

Table 2: Results of Market Model Analysis- Open Market Offer

S. No.	Company Name	date of announcement	slope	intercept	standard error
1	Hindustan Unilever Limited	16-Aug-10	0.483956967	-0.00093757	0.016796566
2	Lakshmi Machine Works Limited	3-Jan-11	0.894056277	0.000752444	0.018233965
3	Hindustan Composites Limited	28-Jan-11	0.1919990	0.0012700	0.0170892
4	FDC Limited	14-Feb-11	0.993427945	0.001483284	0.021281708
5	Balrampur Chini Mills Limited	1-Mar-11	1.403707079	-0.002280699	0.020555782
6	Reliance Infrastructure	6-Apr-11	1.467060555	-0.001983749	0.023664208
7	Allied Digital Services Limited	11-Apr-11	1.439043377	-0.004146592	0.028097343
8	Deccan Chronicle Holdings Limited	11-May-11	1.625843378	-0.003103815	0.025726338
9	Jindal Polyfilms Limited	8-Nov-11	1.4046025	-0.0063628	0.0500290
10	Praj Industries Limited	13-Dec-11	1.542146299	0.001476495	0.023248645
11	CRISIL Limited	15-Dec-11	0.698667315	-0.007007325	0.146068831
12	Ansal Housing and Construction Limited	28-Dec-11	1.2514128	-0.0009335	0.0252717
13	Reliance Industries Limited	25-Jan-12	1.1975272	-0.0002760	0.0128951
14	GeeCee Ventures Limited	30-Jan-12	0.649825682	-2.76566E-05	0.02941308
15	JK Lakshmi Cement Limited	15-Feb-12	1.004437211	0.000177001	0.017798575
16	Zee Entertainment Enterprises Limited	13-Apr-12	0.6304624	0.0001858	0.0178743
17	Selan Exploration Technology Limited	25-Sep-12	0.814025143	0.000148439	0.017281753
18	KRBL Limited	18-Feb-13	0.912891164	0.000884224	0.020826227
19	Maharashtra Seamless Limited	2-May-13	0.103243734	-0.002482821	0.013219663
20	Aptech Limited	11-Jul-13	1.331008064	-0.001259255	0.024016227
21	The Great Eastern Shipping Co Limited	16-Aug-13	0.357553493	-0.000927585	0.015806246
22	Cairn India Limited	16-Jan-14	0.537561467	-1.62791E-05	0.014991458
23	Gujarat Apollo Industries Limited	31-Jan-14	0.460386123	-0.000517986	0.02245609
24	Jindal Steel and Power Limited	24-Feb-14	1.208913751	-0.002026357	0.024658721
25	Mastek Limited	3-Mar-14	0.751811248	0.000851461	0.028069447
26	Supreme Petrochem Limited	2-May-14	0.577088101	-0.000503394	0.019996148
27	OnMobile Global Limited	16-Dec-14	1.661207986	0.000836245	0.038869752

28	Gujarat Apollo Industries Limited	23-Nov-15	0.816479855	0.000520401	0.024233278
29	OnMobile Global Limited	24-Feb-16	1.939391577	0.002920419	0.037170776
30	Excel Industries Limited	11-Apr-16	1.638408954	-0.001337085	0.029749457
31	ECE Industries Limited	18-Apr-16	0.963745527	0.001906921	0.033564963
32	ADF Foods Limited	11-Aug-16	1.2491526	0.0010097	0.0266026
33	Ambika Cotton Mills Limited	28-Nov-16	0.6757536	0.0003543	0.0182916
34	Fineotex Chemical Limited	29-Nov-16	1.867379738	0.00096295	0.034512448
35	The Ramco Cements Limited	16-Feb-17	1.047959181	0.001373955	0.017488344
36	ICRA Limited	28-Feb-17	0.431118882	-0.000150772	0.013495678
37	VRL Logistics Limited	20-Nov-17	0.888107275	2.21321E-05	0.015623648
38	ADF Foods Limited	20-Jul-18	1.812522449	-0.001095056	0.026529177
39	Music Broadcast Limited	3-Aug-18	0.979151149	-0.000956591	0.017363897
40	Thyrocare Technologies Limited	17-Sep-18	0.662529896	-0.000903435	0.013226055
41	ICRA Limited	24-Sep-18	0.3995760	-0.0004098	0.0125563
42	Lakshmi Machine Works Limited	26-Oct-18	1.114920799	0.000236986	0.015690483
43	Natco Pharma Limited	14-Nov-18	0.830900224	-0.001084896	0.016946461
44	Goldiam International Limited	14-Dec-18	0.9524092	0.0002173	0.0305438
45	Cyient Limited	7-Feb-19	0.610491011	0.000364964	0.021855399
46	MAZDA	12-Mar-19	0.452504761	3.02598E-05	0.020165352
47	Orbit Exports Limited	27-Mar-19	0.283950643	-0.002184183	0.021228169
48	Pennar Industries Limited	15-Nov-19	1.133052754	-0.001999915	0.024760305
49	Jagran prakashan Limited	16-Dec-19	0.650685093	-0.003341352	0.023269774

Table 2 shows that the slope for only 20 out of the 49 sample of companies chosen is greater than 1, indicating a greater possibility of less returns as compared to the rise in market. A positive intercept for only 22 companies also highlights chances of fewer returns.

Table 3: Movement of AAR and t-test during Event Window

Day	Tender Offer		Open Market Offer	
	AAR	t-value	AAR	t-value
-15	-0.00112	-0.38416	-0.03343	-7.33351
-14	0.002139	1.035057	0.008462	2.62498
-13	0.000796	0.471772	0.002144	0.814657
-12	0.005048	3.454619	0.002824	1.23901
-11	0.000861	0.659089	0.003475	1.704448
-10	0.002281	1.912279	0.006217	3.340574
-9	0.005364	4.856718	0.008092	4.695829
-8	0.007992	7.735023	-0.00049	-0.30147
-7	0.005561	5.708827	-0.0074	-4.86666
-6	0.005391	5.833485	0.006594	4.574131
-5	0.002824	3.204733	0.004374	3.181879
-4	-0.00273	-3.23118	0.002996	2.27653
-3	-0.00078	-0.95762	0.000101	0.080047
-2	0.000858	1.09893	0.005964	4.894784
-1	0.003759	4.982295	0.004505	3.827317
0	0.003143	4.302213	0.026289	23.06589
1	-0.00344	-4.85182	0.000632	0.571408
2	-0.00465	-6.74646	-0.00368	-3.42624

3	-0.00311	-4.64188	2.73E-05	0.026061
4	-0.00526	-8.04509	0.003192	3.131414
5	-0.00389	-6.09458	0.002925	2.940349
6	-0.00323	-5.17991	0.000274	0.281451
7	-0.00344	-5.64345	0.0044	4.628841
8	-0.00285	-4.78043	0.003029	3.254896
9	-0.00148	-2.53242	0.0017	1.864273
10	0.002042	3.562771	0.002428	2.715171
11	-7.2E-05	-0.12797	0.002598	2.960611
12	0.00157	2.842356	0.002505	2.907046
13	0.000502	0.925474	-0.00199	-2.35444
14	-0.00355	-6.65593	-0.00189	-2.26723
15	2.35E-05	0.044868	-0.00408	-4.98541

As shown in Table 3, for tender offer of buyback method, there is a cluster of significant t-values around the event day in both the post and pre announcement period. This also shows that the buybacks had a significant impact on the share prices, with chances of leakage of information prior to the announcement. The post buyback announcement period is also marked by a string of negative AARs, showing low returns which point to a negative reaction to the buyback announcement.

For the open market offer method, the t- values were relatively more significant prior to the announcement as opposed to the post period. The statistical significance of the AAR on event day is the highest (23.06) in the event window, indicating a very high return on the day of the announcement. The AARs were mostly positive in the post announcement period, indicating positive returns and a favourable impact of the buyback announcement.

Figure 1: Movement of AAR and CAAR (Tender Offer)

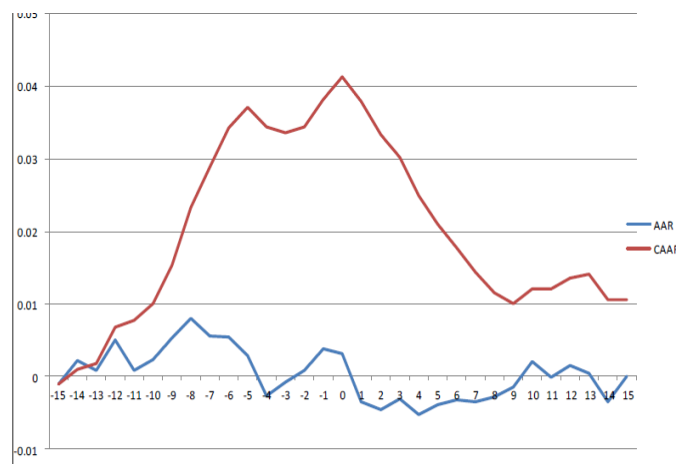
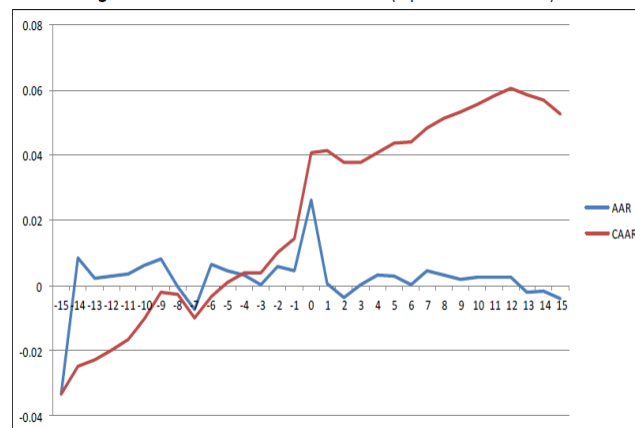


Figure2: Movement of AAR and CAAR (Open Market Offer)



The chart in figure 1 shows the movement of AAR and CAAR over the event window for tender offer method. The CAAR rises to a maximum (4.14%) up to the event day and drops back again. This transitory effect represents a sign reversal in AAR as is visible from the movement of AAR shown in the figure. The overall CAAR is 1.06%. For the case of open market offer, the movement of AAR and CAAR is shown in figure 2. The CAAR in the pre- announcement period shows a steady increase, which points to chances of leakage of information. There is also a significant impact on day 0, showing a permanent effect on the share value with no reversal in AR. A maximum CAAR of 6.18% is observed on day 12, with the overall CAAR being 5.28%. The AR mostly remains positive throughout the whole event window.

CONCLUSION

The current study aimed at finding the impact of buyback decisions by studying its effect on share prices. A total of 140 cases of buyback announcements were identified during 2010-19, including both tender and open market offers, for the sample to be studied. The tender offer of buyback showed a temporary effect with positive returns prior to the announcement, but a negative impact post announcement showing an unfavourable reaction to the announcement. The open market offer showed a permanent impact on value of the security with high returns on event day and AARs remaining positive post announcement. Both methods showcased statistically significant AARs around the event day, both post and pre buyback announcement showing seepage of information in the market before announcement is made and a considerable impact due to the announcement on the share prices.

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